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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,351	08/01/2003	Patrick G. L. Perdu	690-011194-US (PAR) / D/A	3713

2512 7590 07/07/2009

PERMAN & GREEN
425 POST ROAD
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EXAMINER	
DICKERSON, CHAD S	

ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
07/07/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/633,351	PERDU, PATRICK G. L.	
	Examiner	Art Unit	
	CHAD DICKERSON	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2009*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-5, 9 and 11-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5, 9 and 11-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/15/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 3-5, 9 and 11-17 have been considered but are moot in view of the new ground(s) of rejection. However, the same references of Crowley '727, Kurahashi '379, Murata '028 and Webster '606 are still being applied. The Kurahashi reference replaces the previously used reference of Allen '299 and covers the claim limitations of "*transporting the information device with the printed media*" since the memory within the stacker is considered as the information device and this is transported with the printed media to another device which can perform post processing on the documents[1]. Also, the Kurahashi reference discloses the feature of "*wirelessly recording the post processing instructions on a transportable electronic information device*" because the communication of the stacker tray containing a memory device can occur through infrared communication to an attached copier such

[1] See Kurahashi '396 at paragraphs [0238] and [0254]-[0258].

as the color or black-and-white copiers[2]. It is well known in the art that infrared communication occurs through short range wireless communication that conforms to certain infrared data association standards. Therefore, this newly applied feature is performed.

Lastly, the Kurahashi reference does disclose transporting a stacker that can be considered analogous to a spool since both can hold printed media from the printing device and pass this printed information to an offline post processing device where the information on the electronic device controls the offline post processing. However, the combination of Kurahashi and Crowley did not disclose performing a process "*while the media is unwound from the spool*". The newly applied reference of Laussermair '353 discloses performing a post processing task while unwinding the media from the spool[3]. Therefore, with the above references, the newly added claim limitations are performed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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[2] Id. at paragraphs [0254]-[0256].
[3] See Laussermair '353 at col. 4, ll. 10-36.

4. Claims 1 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Crowley '727 (USP 5193727) in view of Kurahashi '379 (US Pub No 2003/0222396) and Laussermair '353 (USP 6324353).

Re claim 1: Crowley '727 discloses a system for incorporation of post-production operations to a web output from an image transfer device comprising:

accumulating post processing instructions for printed media during printing operations (i.e. the determination system (44) is fed information as to the page, which has an image due to previous printing operations, should contain a post-processing operation. The feeding of information as to which page should receive post-processing is analogous to accumulating post processing for printed media; see fig. 1; col. 4, lines 5-57);

recording the post processing instructions on an information device (i.e. the determining means (44) has a register means that is able to store information related to a data value representative of a post-production operation to be performed upon the web. The recording of the post processing instructions is analogous to the storing of the post processing instructions; see fig. 1; col. 2, lines 24-49; col. 4, lines 58-67 and col. 5, lines 1-5);

transporting the information on the printed media from an online printing/copying system where the printing operations occur to a separate offline post processing system where the post processing occurs (i.e. while the web is fed to the image transferring device, it is transported to the post-processing device along the intermediate loop (74). Also, information regarding the web is also transported to the determination unit (44)

and assists the post-production system to determine the period in which the page in which post-processing should occur in the post-processing device (48). Since the post-processing device and the image transfer device are not directly connected, the two devices are considered as separate; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5); and

playing back the post processing instructions at the offline post processing system for controlling offline post processing of the printed media (i.e. the post processing operation instruction is presented, or commanded, to the post-processing device to perform a desired operation to a certain page in the web. Since the post-processing device (48) is separated from the image transfer device (40), the post-processing device is considered to be offline. This is analogous to playing back the post processing instruction at the post processing device for controlling offline post processing of the printed media; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5).

However, the combination of Crowley '727 fails to teach the features of wirelessly recording the post processing instructions on a transportable electronic information device without marking any media with the post processing instructions; transporting the information device on a spool holding the printed media to an offline post processing system, wirelessly playing back the post processing instructions from the information device.

However, this is well known in the art as evidenced by Kurahashi '396. Kurahashi '396 discloses the features of wirelessly recording (i.e. the communication of

the stacker tray containing a memory device can occur through infrared communication to an attached copier such as the color or black-and-white copiers; see paragraphs [0254]-[0256]) the post processing instructions on a transportable electronic information device without marking any media with the post processing instructions (i.e. like the reference of Crowley, the Kurahashi reference involves transporting printed material or sheets to another device for post processing (same field of endeavor). However, in the storage medium (1202), the post processing instructions are written in the storage medium by the color MFP (104). The storage medium has job and post-processing information written, or recorded, on the storage medium without the instructions being marked on any media in the system; see figs. 26-28; paragraph [0254]);

transporting the information device on a spool holding the printed media (i.e. in the system, the stacker tray containing, or holding, the printed sheets and the memory containing instructions can be transported to another copier device for post processing functions to be performed on the sheets; see paragraphs [0238] and [0254]-[0258]) to an offline post processing system (i.e. shown in figure 28 is the stacker (1207 and 1208) being stored in the inserter (108). The system detects the stacker in the inserter and this process of detection is shown in figure 22. The storage medium (1202), considered as the electronic information device, is also transported to the inserter. With the storage medium and the container being transported to the inserter of the black-and-white printer, the pages of print jobs are mixed with color and black-and-white sheets and this information is recorded on the storage medium. Next, the container that stores the mixed sheets that can be transported to the collator (500) and finisher (600). The

transported sheets are transported along with the storage memory device (2408) to the collator and finisher in the system; see figs. 40 and 45-51; paragraphs [0230], [0238] and [0373]-[0379]),

wirelessly playing back the post processing instructions from the information device (i.e. the communication of the stacker tray containing a memory device can occur through infrared communication to an attached copier such as the color or black-and-white copiers. The post processing instructions to occur to the sheets can be read through infrared communication; see paragraphs [0254]-[0256]).

Therefore, in view of Kurahashi '396, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of wirelessly recording the post processing instructions on a transportable electronic information device without marking any media with the post processing instructions, transporting the information device on a spool holding the printed media to an offline post processing system, wirelessly playing back the post processing instructions from the information device, incorporated in the device of Crowley in order to have a storage medium store sheet information and to have the post-processing device perform processing based on the stored sheet information (as stated in Kurahashi '396 paragraph [0084]).

However, the combination Crowley '727 and Kurahashi '396 fails to specifically teach while the media is unwound from the spool.

However, this is well known in the art as evidenced by Laussermair '353. Laussermair '353 discloses while the media is unwound from the spool (i.e. the reference of Laussermair '353 is similar to Crowley and Kurahashi since it contains a

processing a job with a printer and an offline post processing device (same field of endeavor). However, Laussermair '353 discloses performing a post processing task while unwinding the media from the spool; see col. 4, ll. 10-36).

Therefore, in view of Laussermair '353, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of while the media is unwound from the spool, incorporated in the device of Crowley '727, as modified by the features of Kurahashi '396, in order to dock a full roll on a post processing device and unwinding the roll for post processing (as stated in Laussermair '353 at col. 4, ll. 10-36).

Re claim 5: The teachings of Crowley '727 in view of Kurahashi '396 and Laussermair '353 are disclosed above.

Crowley '727 discloses the method, wherein playing back the post processing instructions comprises:

conveying the post processing instructions from the information device through a link to a post processing system (i.e. the determination device (44), analogous to the information device, conveys the post-processing instructions to the post-processing device (48). Although a link is not specifically disclosed in conveying the instructions, the instructions are conveyed between the two devices in a manner of communication that performs the function of a link; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5); and

routing the post processing instructions to one or more post processing modules for performing the offline post processing (i.e. the post-processing device receives the instructions and performs the operation of post-processing to the document that is indicated for poet-processing. In this example, only one post-processing device is used, however, there can be a plurality of post-processing devices used in the system; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67; col. 5, lines 1-5 and col. 7, lines 1-13).

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crowley '727, as modified by Kurahashi ‘396 and Laussermair ‘353, and further in view of Webster ‘606 (USP 5559606).

Re claim 3: The teachings of Crowley '727 in view of Kurahashi ‘396 and Laussermair ‘353 are disclosed above.

Crowley '727 discloses the method, wherein accumulating post processing instructions comprises compiling post processing instructions from a printing module (i.e. the determination unit (44) obtains signals from the image forming device (40) signaling a post-processing operation to occur to a page being passed through the system on the web; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5).

However, Crowley '727 in view of Kurahashi ‘396 and Laussermair ‘353 fails to teach compiling post-processing instructions from each of a plurality of printing modules.

However, this is well known in the art as evidenced by Webster '606. Webster '606 discloses compiling post-processing instructions from each of a plurality of printing modules (i.e. like the references of Crowley and Kurahashi, the Webster reference involves transporting printed sheets to an offline post processing device (same field of endeavor). However, from various outside sources, jobs indicating several finishing or post-processing procedures are gathered by the marking modules and eventually sent to the respective post-processing devices in the system. The finishing modules gather the post-processing instructions from the marker or printer modules. Gathering the instructions is analogous to compiling the post-processing instructions; see col. 5, lines 54-66 and col. 6, lines 1-45).

Therefore, in view of Webster '606, it would have been obvious to one of ordinary skill at the time the invention was made to compile post-processing instructions from each of a plurality of printing modules in order to coordinate the machine modules to render a job (as stated in Webster '606 col. 6, lines 1-45).

Re claim 4: The teachings of Crowley '727 in view of Kurahashi ‘396 and Laussermair ‘353 are disclosed above.

Crowley '727 discloses the method, wherein recording the post processing instructions comprises:

conveying the accumulated post processing instructions (i.e. in the system, the post-processing instructions are conveyed to the determination unit (44) in order to

assist the post-processing device (48) in performing the post-processing operation; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5); and

recording the accumulated post processing instructions by way of a link between the individual one printing module and the information device (i.e. the post-processing instructions are recorded or stored on the determination device, which is analogous to the information device. The data (54) sent from the image transfer device (40) to the determination device (44) is transmitted through a means of communication, this means of communication may not specifically be called a link, but the communication between the two devices functions as a link; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5).

However, Crowley '727 in view of Kurahashi '396 and Laussermair '353 fails to teach conveying the accumulated post processing instructions to a plurality of printing modules.

However, this is well known in the art as evidenced by Webster '606. Webster '606 discloses conveying the accumulated post processing instructions to a plurality of printing modules (i.e. like the references of Crowley and Kurahashi, the Webster reference involves transporting printed sheets to an offline post processing device (same field of endeavor). However, in the system, a plurality of devices conveys post processing instructions to marking modules or printing modules; see col. 5, lines 54-66 and col. 6, lines 1-45).

Therefore, in view of Webster '606, it would have been obvious to one of ordinary skill at the time the invention was made to convey the accumulated post processing

instructions to a plurality of printing modules in order to coordinate the machine modules to render a job (as stated in Webster '606 col. 6, lines 1-45).

6. Claims 9, 13, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata '028 (USP 7054028) in view of Crowley '727, Kurahashi '396 and Laussermair '353.

Re claim 9: Murata '028 discloses an offline print method for printing image data in a removable storage medium based on output control data in the same medium comprising:

an online printing/copying operation having a controller for determining post processing instructions for printed media (i.e. the printer/copier in the system has a controller (85) that is able to determine the post processing instructions for printed media that are installed in the PC card slot (89) through the removable storage medium; see figs. 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49) and for recording the post processing instructions on an information device (i.e. the output control data relating to the finishing operations, or post-processing, are stored on a removable storage medium. The function of recording is analogous to the function of storing; see col. 3, lines 15-35 and col. 10, lines 34-49); and

an post processing operation operable to play back the post processing instructions from the information device for controlling post processing of the printed media (i.e. the printer/copier with finishing capabilities are considered as an offline

printing function. A post-processing operation, or instruction, is able to be presented to a finishing device from the removable storage medium, for controlling the post-processing of the printed media; see col. 3, lines 15-35 and col. 10, lines 34-49).

However, Murata '028 fails to teach offline post processing and a holding device for conveying the printed media and the information together from the online printing/copying operation to the offline post processing operation.

However, this is well known in the art as evidenced by Crowley '727. Crowley '727 discloses offline post processing (i.e. similar to the Murata system, the Crowley invention is involved with transporting post processing information to a post processing device (same field of endeavor). However, in the system of Crowley '727, since the post production device is a distance away from the image transfer device, this is considered to be offline post processing. Also, the system determines when the page is about to pass through the post-production device. With this determination, the page is conveyed along with the information regarding the post-production to the post-production device in order for a post-production operation to be performed on the print media. This performs the feature of the holding device that conveys the printed material; see col. 1, line 40 - col. 2, line 50 and col. 4, line 5 – col. 6, line 43).

Therefore, in view of Crowley '727, it would have been obvious to one of ordinary skill at the time the invention was made to have offline post processing and a holding device for conveying the printed media and the information together from the online printing/copying operation to the offline post processing operation in order to perform

multiple types of post-production operations at various locations of the moving web (as stated in Crowley '727 col. 1, lines 40 – col. 2, line 49).

However, Murata '028 in view of Crowley '727 fails to teach conveying the printed media and the information device together.

However, the combination of Murata '028 and Crowley '727 fails to teach the features of wirelessly recording the post processing instructions on a transportable electronic information device positioned on a spool of the printed media without marking the post processing instructions on any media; an offline post processing operation operable to wirelessly play back the post processing instructions from the transportable electronic information device for controlling offline post processing of the printed media; wherein the spool is configured for conveying the printed media and the transportable electronic information device together.

However, this is well known in the art as evidenced by Kurahashi '396. Kurahashi '396 discloses the features of wirelessly recording (i.e. the communication of the stacker tray containing a memory device can occur through infrared communication to an attached copier such as the color or black-and-white copiers; see paragraphs [0254]-[0256]) the post processing instructions on a transportable electronic information device positioned on a spool of the printed media without marking the post processing instructions on any media (i.e. like the references of Murata and Crowley, the Kurahashi reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). In the storage medium (1202), the post processing instructions are written in the storage medium by the color MFP (104). The

storage medium has job and post-processing information written, or recorded, on the storage medium without the instructions being marked on any media in the system; see figs. 26-28; paragraph [0254]);

an offline post processing operation operable to wirelessly play back the post processing instructions from the transportable electronic information device for controlling offline post processing of the printed media (i.e. shown in figure 28 is the stacker (1207 and 1208) being stored in the inserter (108). The system detects the stacker in the inserter and this process of detection is shown in figure 22. The storage medium (1202), considered as the electronic information device, is also transported to the inserter. With the storage medium and the container being transported to the inserter of the black-and-white printer, the pages of print jobs are mixed with color and black-and-white sheets and this information is recorded on the storage medium. Next, the container that stores the mixed sheets can be transported to the collator (500) and finisher (600). The transported sheets are transported along with the storage memory device (2408) to the collator and finisher in the system and the instructions regarding finishing are performed, or played back. The communication of the stacker tray containing a memory device can occur through infrared communication to an attached copier such as the color or black-and-white copiers. The post processing instructions to occur to the sheets can be read through infrared communication; see figs. 40 and 45-51; paragraphs [0230], [0238], [0254]-[0256] and [0373]-[0379]); and

wherein the spool is configured for conveying the printed media and the transportable electronic information device together (i.e. in the system, the container is

able to hold both the printed media and the storage medium together. The container holds both the storage medium and the sheets and the container is transferred, or conveyed, to the collator and finisher from the image forming apparatus used to print color or black-and-white sheets and mixing such sheets with the inserter. The holding device is considered to be a bin and the container holding both the sheets and the storage device is a bin; see figs. 40 and 45-51; paragraphs [0230], [0238] and [0373]-[0379]).

Therefore, in view of Kurahashi '396, it would have been obvious to one of ordinary skill at the time the invention was made to have the features of the features of wirelessly recording the post processing instructions on a transportable electronic information device positioned on a spool of the printed media without marking the post processing instructions on any media, an offline post processing operation operable to wirelessly play back the post processing instructions from the transportable electronic information device for controlling offline post processing of the printed media, wherein the spool is configured for conveying the printed media and the transportable electronic information device together, as combined with the features of Murata'028, as modified by the features of Crowley, in order to have a storage medium store sheet information and to have the post-processing device perform processing based on the stored sheet information (as stated in Kurahashi '396 paragraph [0084]).

However, the combination Murata '028, Crowley '727 and Kurahashi '396 fails to specifically teach while the media is unwound from the spool.

However, this is well known in the art as evidenced by Laussermair '353. Laussermair '353 discloses while the media is unwound from the spool (i.e. the reference of Laussermair '353 is similar to Crowley and Kurahashi since it contains a processing a job with a printer and an offline post processing device (same field of endeavor). However, Laussermair '353 discloses performing a post processing task while unwinding the media from the spool; see col. 4, ll. 10-36).

Therefore, in view of Laussermair '353, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of while the media is unwound from the spool, incorporated in the device of Crowley '727, as modified by the features of Kurahashi '396, in order to dock a full roll on a post processing device and unwinding the roll for post processing (as stated in Laussermair '353 at col. 4, ll. 10-36).

Re claim 13: The teachings of Murata '028 in view of Crowley '727, Kurahashi '396 and Laussermair '353 are disclosed above.

Murata '028 discloses the printing system, wherein the offline post processing operation further comprises:

one or more post processing modules for performing the post processing (i.e. in the printer/copier system, there a post processing module that performs different features of post processing or finishing; see col. 3, lines 15-35 and col. 10, lines 34-49);

a link, connected to at least one of the one or more post processing modules for playing back the post processing instructions for use by the one or more post

processing modules (i.e. in the printer, there is a communication link that links the CPU (85) to the finisher, in order to instruct the finisher of what finishing operations to perform. When the removable storage medium is installed in the printer, the post-processing instructions are played back, or presented, to the finisher in order to control the finishing functions designated by the user; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49).

However, Murata '028 fails to teach an offline post processing.

However, this is well known in the art as evidenced by Crowley '727. Crowley '727 discloses offline post processing (i.e. like the reference of Murata, the Crowley reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). However, in the system of Crowley '727, since the post production device is a distance away from the image transfer device, this is considered to be offline post processing. Also, the system determines when the page is about to pass through the post-production device. With this determination, the page is conveyed along with the information regarding the post-production to the post-production device in order for a post-production operation to be performed on the print media; see col. 1, line 40 - col. 2, line 50 and col. 4, line 5 – col. 6, line 43).

Therefore, in view of Crowley '727, it would have been obvious to one of ordinary skill at the time the invention was made to have offline post processing in order to perform multiple types of post-production operations at various locations of the moving web (as stated in Crowley '727 col. 1, lines 40 – col. 2, line 49).

Re claim 14: Murata '028 discloses an offline print method for printing image data in a removable storage medium based on output control data in the same medium comprising:

a computer useable medium having computer readable code means embodied therein for causing a computer to print media (i.e. the CPU (85) contained in the printer causes the printer to print different types of images on media according to the input in the system; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49), the computer readable code means in the computer program product comprising:

computer readable program code means for causing a computer to accumulate post processing instructions (i.e. the CPU (85) accumulates post processing instructions from the removable storage memory device after the post-processing instructions are stored on the removable device and installed in the PC card slot (89) of the printer; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49);

computer readable program code means for causing a computer to record the post processing instructions on an information device (i.e. the user's computer records information regarding post-processing instructions on a removable storage device, which is analogous to an information device; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49); and

computer readable program code means for causing a computer to play back the post processing instructions for controlling post processing of the printed media (i.e. when the removable storage medium is installed in the PC card slot (89), the information for instructing post-processing is played back, or presented, in order to

control the post processing of the printed media that is output from the printer; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49).

However, Murata '028 fails to teach to accumulate post processing instructions for the printed media during printing operations and offline post processing.

However, this is well known in the art as evidenced by Crowley '727. Crowley '727 discloses to accumulate post processing instructions for the printed media during printing operations (i.e. like the reference of Murata, the Crowley reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). During the printing process, the post processing device receives or accumulates post-processing instructions for the printed media during printing from the determination device (44). The determination device (44) receives information from the image transfer device (40) that assists the determination device (44) when the post-processing should be performed; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5) and offline post processing (i.e. since the post-processing device is separate from the image forming device, this is considered as offline post processing; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5).

Therefore, in view of Crowley '727, it would have been obvious to one of ordinary skill at the time the invention was made to accumulate post processing instructions for the printed media during printing operations and have offline post processing in order to instruct the post-production device to perform an operation when data gathered indicates such an action (as stated in Crowley '727 col. 4, lines 5-67 and col. 5, lines 1-5).

However, the combination of Murata '028 and Crowley ‘727 fails to teach the features to wirelessly record the post processing instructions on a transportable electronic information device positioned on a spool of the printed media without marking the post processing instructions on any media and to play back the post processing instructions for controlling offline post processing of the printed media from the transportable electronic information device after the electronic information device together with the printed media has been transported from an online printing/copying system where the printing operation occur to a separate offline post processing system where the offline post processing occurs.

However, the combination of Murata ‘028 and Crowley ‘727 fails to teach the features to wirelessly record the post processing instructions on a transportable electronic information device positioned on a spool of the printed media without marking the post processing instructions on any media and to play back the post processing instructions for controlling offline post processing of the printed media after the electronic information device together with the printed media has been transported on the spool.

However, this is well known in the art as evidenced by Kurahashi ‘396. Kurahashi ‘396 discloses the features to wirelessly record (i.e. the communication of the stacker tray containing a memory device can occur through infrared communication to an attached copier such as the color or black-and-white copiers; see paragraphs [0254]-[0256]) the post processing instructions on a transportable electronic information device positioned on a spool of the printed media without marking the post processing

instructions on any media (i.e. like the references of Murata and Crowley, the Kurahashi reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). In the storage medium (1202), the post processing instructions are written in the storage medium by the color MFP (104). The storage medium has job and post-processing information written, or recorded, on the storage medium without the instructions being marked on any media in the system; see figs. 26-28; paragraph [0254]); and

to wirelessly play back the post processing instructions from the information device for controlling offline post processing of the printed media after the electronic information device together with the printed media has been transported on the spool (i.e. shown in figure 28 is the stacker (1207 and 1208) being stored in the inserter (108). The system detects the stacker in the inserter and this process of detection is shown in figure 22. The storage medium (1202), considered as the electronic information device, is also transported to the inserter. With the storage medium and the container being transported to the inserter of the black-and-white printer, the pages of print jobs are mixed with color and black-and-white sheets and this information is recorded on the storage medium. Next, the container that stores the mixed sheets can be transported to the collator (500) and finisher (600). The transported sheets are transported along with the storage memory device (2408) to the collator and finisher in the system and the instructions regarding finishing are performed, or played back. The container is able to hold both the printed media and the storage medium together. The container holds both the storage medium and the sheets and the container is transferred, or conveyed,

to the collator and finisher from the image forming apparatus used to print color or black-and-white sheets and mixing such sheets with the inserter. The communication of the stacker tray containing a memory device can occur through infrared communication to an attached copier such as the color or black-and-white copiers. The post processing instructions to occur to the sheets can be read through infrared communication; see figs. 40 and 45-51; paragraphs [0230], [0238], [0254]-[0256] and [0373]-[0379]).

Therefore, in view of Kurahashi '396, it would have been obvious to one of ordinary skill at the time the invention was made to have the features to record the post processing instructions on a transportable electronic information device without marking any media and to play back the post processing instructions for controlling offline post processing of the printed media from the transportable electronic information device after the electronic information device together with the printed media has been transported incorporated in the device of Murata, as combined with the features of Crowley, as modified by the features of Kurahashi '396, in order to have a storage medium store sheet information and to have the post-processing device perform processing based on the stored sheet information (as stated in Kurahashi '396 paragraph [0084]).

However, the combination Murata '028, Crowley '727 and Kurahashi '396 fails to specifically teach while the media is unwound from the spool.

However, this is well known in the art as evidenced by Laussermair '353. Laussermair '353 discloses while the media is unwound from the spool (i.e. the reference of Laussermair '353 is similar to Crowley and Kurahashi since it contains a

processing a job with a printer and an offline post processing device (same field of endeavor). However, Laussermair '353 discloses performing a post processing task while unwinding the media from the spool; see col. 4, ll. 10-36).

Therefore, in view of Laussermair '353, it would have been obvious to one of ordinary skill at the time the invention was made to have the feature of while the media is unwound from the spool, incorporated in the device of Crowley '727, as modified by the features of Kurahashi '396, in order to dock a full roll on a post processing device and unwinding the roll for post processing (as stated in Laussermair '353 at col. 4, ll. 10-36).

Re claim 16: The teachings of Murata '028 in view of Crowley '727, Kurahashi '396 and Laussermair '353 are disclosed above.

Murata '028 discloses the computer useable medium, wherein the computer readable program code means for causing a computer to record the post processing instructions (i.e. the user's computer records information regarding post-processing instructions on a removable storage device, which is analogous to an information device; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49) comprises:

computer readable program code means for causing a computer to convey the accumulated post processing instructions to an individual one of a plurality of printing modules (i.e. the user's computer conveys accumulated post processing instructions to an individual printing module through a removable storage medium that stores the post-

processing instructions for the printer; see col. 3, lines 15-35 and col. 10, lines 34-49); and

computer readable program code means for causing a computer to record the accumulated post processing instructions by way of the information device (i.e. the removable storage medium is used to record the accumulated post-processing instructions that will control the finishing output of the image data; see col. 3, lines 15-35 and col. 10, lines 34-49).

However, Murata '028 fails to teach causing a computer to record the accumulated post processing instructions by way of a link between the individual one printing module and the information device.

However, this is well known in the art as evidenced by Crowley '727. Crowley '727 discloses causing a computer to record the accumulated post processing instructions by way of a link between the individual one printing module and the information device (i.e. like the reference of Murata, the Crowley reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). However, the determination device (44) has a means for recording, or storing, the accumulated post-processing instructions between the image transfer device (40), considered as the printing module, and the determination unit (44) with a storage device, considered in this example as an information device. Although a specific link is not disclosed, the communication between the two devices that signal to the determination device (44) to perform a post-processing function on a certain part of the web, functions as a link between the two devices. The communication between the

devices performs the function of the link; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5).

Therefore, in view of Crowley '727, it would have been obvious to one of ordinary skill at the time the invention was made to cause a computer to record the accumulated post processing instructions by way of a link between the individual one printing module and the information device in order to be fed data that contains a post-processing operation (as stated in Crowley '727 col. 4, lines 5-67).

Re claim 17: The teachings of Murata '028 in view of Crowley '727, Kurahashi '396 and Laussermair '353 are disclosed above.

Murata '028 discloses the computer program product, wherein the computer readable program code means for causing a computer to play back the post processing instructions media (i.e. when the removable storage medium is installed in the PC card slot (89), the information for instructing post-processing is played back, or presented, in order to control the post processing of the printed media that is output from the printer; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49) comprises:

computer readable program code means for causing a computer to convey the post processing instructions from the information device through a link to a post processing system (i.e. the removable storage medium is placed in the PC card slot (89) to convey the post processing instructions from the storage medium to the post processing, or finishing, system. The communication between devices in the system occurs through the CPU bus (83), which operates as a link between the storage

medium, considered as the information device, and the printer shown in figure 1; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 3-49); and

computer readable program code means for causing a computer to route the post processing instructions to one or more post processing modules for performing the post processing (i.e. when the removable storage medium is in the PC card slot (89), the post-processing instructions are sent to the finisher to perform one of the many finishing functions performed by the finisher (222 or 221) in the system; see figs. 1 and 8; col. 3, lines 15-35; col. 10, lines 3-67 and col. 11, lines 1-13).

However, Murata '028 fails to teach offline post processing.

However, this is well known in the art as evidenced by Crowley '727. Crowley '727 discloses offline post processing (i.e. like the reference of Murata, the Crowley reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). However, since the post-processing device is separate from the image forming device, this is considered as offline post processing; see fig. 1; col. 2, lines 24-49; col. 4, lines 5-67 and col. 5, lines 1-5).

Therefore, in view of Crowley '727, it would have been obvious to one of ordinary skill at the time the invention was made to have offline post processing in order to have post-production device to perform a post-production operation (as stated in Crowley '727 col. 4, lines 5-67 and col. 5, lines 1-5).

7. Claims 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murata ‘028, as modified by Crowley ‘727, Kurahashi ‘396 and Laussermair ‘353, and further in view of Webster ‘606.

Re claim 11: The teachings of Murata '028 in view of Crowley ‘727, Kurahashi ‘396 and Laussermair ‘353 are disclosed above.

However, Murata '028 in view of Crowley ‘727, Kurahashi ‘396 and Laussermair ‘353 fails to teach the printing system, wherein the online printing/copying operation further comprises a plurality of printing modules, and the post processing instructions are compiled from each of the plurality of printing modules.

However, this is well known in the art as evidenced by Webster '606. Webster '606 discloses wherein the online printing/copying operation further comprises a plurality of printing modules (i.e. like the references of Murata, Crowley and Kurahashi, the Webster reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). However, in figure 3, a plurality of marking, or printing, modules are disclosed. These marking modules are used to print images on paper feed to the marking modules; see col. 5, lines 54-66 and col. 6, lines 1-45), and the post processing instructions are compiled from each of the plurality of printing modules (i.e. in the prior art example, the finishing modules receive instruction from the marking modules. If the prior art used the plurality of marking modules in figure 3 to operate in the prior art system, the function of having multiple post-processing

instructions gathered or compiled from the plurality of marking modules, or printing modules, will be performed; see figs. 2 and 3; col. 5, lines 16-66 and col. 6, lines 1-66).

Therefore, in view of Webster '606, it would have been obvious to one of ordinary skill at the time the invention was made to have the online printing/copying operation further comprise a plurality of printing modules, and the post processing instructions to be compiled from each of the plurality of printing modules in order to coordinate the modules to render a job (as stated in Webster '606 col. 6, lines 26-35).

Re claim 12: The teachings of Murata '028 in view of Crowley '727, Kurahashi '396, Laussermair '353 and further in view of Webster '606 are disclosed above.

However, Murata '028 in view of Crowley '727 fails to teach the printing system, further comprising: a final printing module where post processing instructions are accumulated from the plurality of printing modules and a link for recording the accumulated post processing instructions from the final printing module to the information device.

However, this is well known in the art as evidenced by Webster '606. Webster '606 discloses the printing system, further comprising: a final printing module where post processing instructions are accumulated from the plurality of printing modules (i.e. like the references of Murata, Crowley and Kurahashi, the Webster reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). However, the print module, or marking module, receives requests or instructions for post processing to occur to the document currently being processed for

printing. These requests are gathered, or accumulated, in order to be given to the finisher to instruct finishing functions; see col. 5, lines 16-53) and

a link for recording the accumulated post processing instructions from the final printing module to the information device (i.e. there is a visible link between the marking module and the finishing module. The marking module instructs the finishing module of the finishing tasks by a way of communication, although this manner of communication is not specified as a link. However, it is clearly seen how the invention describes how certain modules depend on the modules that precede others in the feeding, printing and finishing process. The control dependency is on the former device in the device order, which means that a marking device controls the finishing device based on the order of the neighboring module; see col. 5, lines 16-53).

Therefore, in view of Webster '606, it would have been obvious to one of ordinary skill at the time the invention was made to have a final printing module where post processing instructions are accumulated from the plurality of printing modules and a link for recording the accumulated post processing instructions from the final printing module to the information device in order to coordinate the modules to render a job (as stated in Webster '606 col. 6, lines 26-35).

Re claim 15: The teachings of Murata '028 in view of Crowley ‘727, Kurahashi ‘396 and Laussermair ‘353 are disclosed above.

Murata '028 discloses the computer program product, wherein the computer readable program code means for causing a computer to accumulate post processing

instructions (i.e. the CPU (85) accumulates post processing instructions from the removable storage memory device after the post-processing instructions are stored on the removable device and installed in the PC card slot (89) of the printer; see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49) comprises computer readable program code means for causing a computer to compile post processing instructions (i.e. the printer's CPU (85) compiles, or gathers, post-processing instructions from the removable storage medium installed in the PC card slot (89); see fig. 1, 2 and 8; col. 3, lines 15-35 and col. 10, lines 34-49).

However, Murata '028 in view of Crowley '727, Kurahashi '396 and Laussermair '353 fails to teach to compile post processing instructions from each of a plurality of printing modules.

However, this is well known in the art as evidenced by Webster '606. Webster '606 discloses to compile post processing instructions from each of a plurality of printing modules (i.e. like the references of Murata, Crowley and Kurahashi, the Webster reference involves transporting post processing instructions to an offline post processing device (same field of endeavor). However, in figure 3, with a plurality of marking, or printing modules, the finishing modules can gather, or compile, post-processing instructions from the marking modules in the system. In the prior art system, the marking modules convey the finishing instructions to the next module to perform the function. With figure 3 displaying a plurality of marking modules, the prior art system can use these modules to send post-processing instructions to the next finishing module in the process; see figs. 2-4; col. 5, lines 15-53).

Therefore, in view of Webster '606, it would have been obvious to one of ordinary skill at the time the invention was made to compile post processing instructions from each of a plurality of printing modules in order to coordinate modules to render a job (as stated in Webster '606 col. 6, lines 1-66).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHAD DICKERSON whose telephone number is (571)270-1351. The examiner can normally be reached on 9:30-6:00pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Haskins can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D./
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